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300KN UNIVERSAL TESTING MACHINE QM- 300M2F



APPLICATIONS

300kN Universal Testing Machine QM-300M2F

Universal Testing Machine QM-300M2F is capable of conducting material and product tests up to 300 kN. The rigid and durable structure of the universal tensile testing machine ensures more stable tests and reduces damage to the machine. It is commonly used for testing metals, composites, construction materials, and other materials that require high test force.



Equipped with an advanced M2F controller system, the tensile machine can perform creep, constant compression, cycle, and multi-step test modes, conforming to various tensile, compression, bending, peeling, and compression tests. The M2F

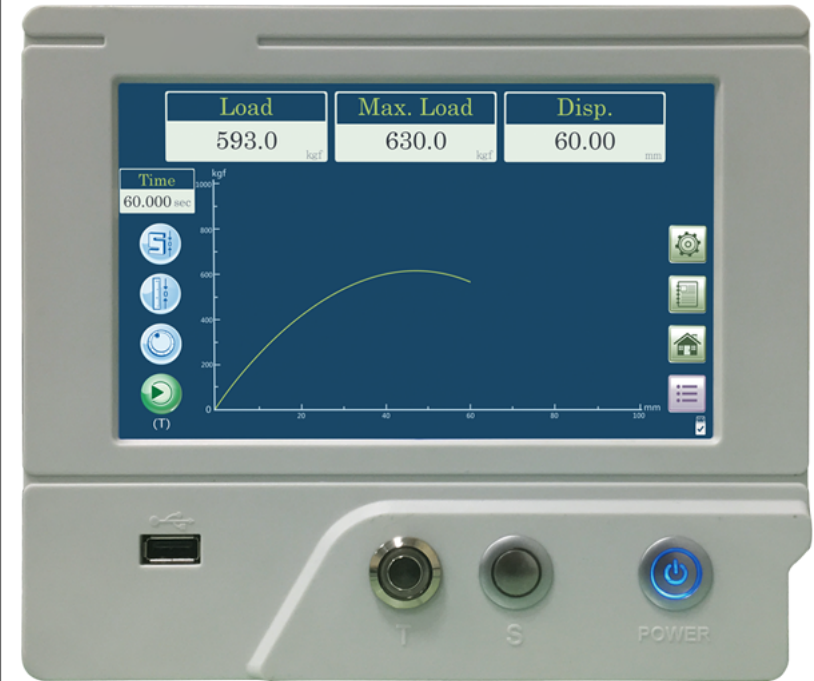
software for universal testing machines supports multiple languages and is very user-friendly. The tensile testing machine includes various metric units and real-time graphics, and it provides comprehensive analysis test data for a variety of material analyses after testing.

Low noise operations and accurate test results are guaranteed. The 7-inch TFT touch screen is an optional accessory for performing tests on a standalone basis. The jog controller allows slight adjustments to the crosshead, making calibration and positioning more convenient and safe, thus preventing overload. The speed range is 0.2-375 mm/min, conforming to various standards.

Accessories

Display Panel

- 7" color touch TFT display panel.
- Supports English and other languages.
- Displays force, pressure, displacement, and time.
- Test condition settings include test speed, direction, auto-return, and stop at the break point.
- Analyzes maximum force, interval force, force at break point, and more.
- Provides multiple stopping point settings: force, displacement, time, and elongation.
- Supports over-travel, overload, and overtime stop protection settings.
- Can save up to 50 test results; supports USB storage.
- Option to restore the machine to factory settings.
- Stand-alone mode calibration available.
- Supports switching between Metric and Imperial units.



QM-L-Ext Long Extensometer

QM-L-Ext Long Extensometer is ideal for measuring elongations greater than 20% in materials such as rubber, plastic, PE, fabric, and webbing. These high-elongation measurement accessories are typically used with dumbbell-shaped specimens. The extensometer can connect with the testing machine to automatically detect the deformation of the test piece during testing.



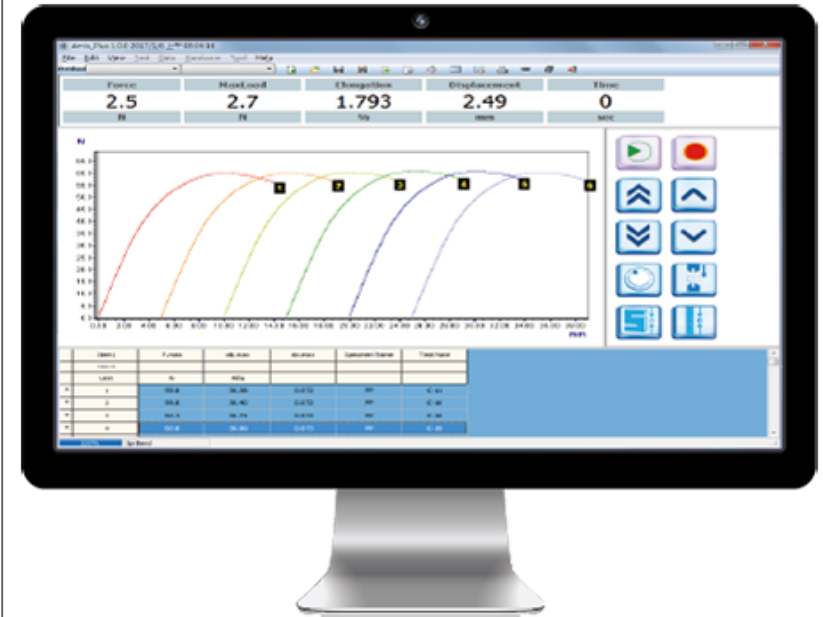
QM-S-Ext Clip-on Extensometer

QM-S-Ext Clip-on Extensometer is designed to measure the deformation of metals and hard plastics with less than 100% elongation. During testing, it can measure the complete deformation rate without needing to be dismantled. For specimens with longer gauge lengths or higher elongation rates, a customized longer extensometer is also available.



Software functions

- Data sampling rate up to 400 Hz.
- Controlled by mouse, keyboard, and the up/down button on the machine for quick grip position adjustment.
- Requires Windows system.
- Available languages: English and other languages.
- Operation Mode: TCP/IP two-way transmission to connect with PC.
- Can import and display multiple test data simultaneously.
- Supports switching between Metric and Imperial units.
- Provides a flexible table for data analysis.
- Allows naming data results and creating user-defined formulas.
- Data can be displayed in table, graph, or both.
- Data processing capabilities: save, import, list, statistical comparison, etc.
- Adjustable X-Y axis on the graph, including curve marks, interval marks, slope, etc.
- Supports tensile, compression, bending, spring, and other tests.
- Machine protection features: over-travel, overload, and overtime stop conditions.
- Supports various test patterns such as constant tensile (compression) and 10-stage settings.
- Specimen modular design for easy and quick specimen information setting.
- Test condition modular design to reduce human error.
- Supports upper and lower limits for data selection to access key information.
- Multiple I/O ports for additional test functions.



FEATURES

300kN Universal Testing Machine QM-300M2F Features

- Supports automatic identification of load cell parameters.
- Supports automatic identification of displacement accessory parameters.

- Includes screw holes for future use with other fixtures.
- The jog controller allows precise adjustment of displacement, making calibration more convenient.
- No specific PC requirements for connecting software, making PC maintenance easy.
- Allows up to 10 different speed settings in a single test.
- Provides defined test modes for multi-stage cyclic tests, long-period tests, reciprocating tests, and more.

TECHNICAL SPECIFICATIONS

300kN Universal Testing Machine QM-300M2F Technical Specifications

Model	QM-300M2F	QM-200M2F	QM-100M2F
Max. Capacity	300 kN	200 kN	100 kN
Unit	Force : gf, kgf, lbf, N, kN, ozf, tonf(SI), ton(long), tonf(short) Pressure : Kpa, Mpa, psi, bar, mm-Aq, mm-Hg		
Force Resolution	1/100,000 (31 bits)		
Force Precision	±1% (within 2%-100% of load cell capacity; higher accuracy is optional)		
Test Stroke (w/o grips)	1100 mm		
Stroke Resolution	0.0001 mm		
Cantilever Distance	550 mm (680 mm, 800 mm are optional.)		
Speed Range	High Speed Mode: 0.02 ~ 330.0 mm/min Low Speed Mode: 0.0001 ~ 1.0 mm/min	High Speed Mode: 0.02 ~ 330.0 mm/min Low Speed Mode: 0.0001 ~ 1.0 mm/min	High Speed Mode: 0.2 ~ 375.0 mm/min Low Speed Mode: 0.0001 ~ 2.0 mm/min
Speed Precision	±1%		
PC-Port	RJ45 (TCP/IP) [Software is optional]		

Data Sampling Rate	Max. 1200 Hz		
Motor	Servo Motor		
Machine Stiffness	388.60 kN/mm	388.60 kN/mm	85.10 kN/mm
Hardware Safety Protection	Upper/Lower limit, Emergency Stop Button		
Software Safety Protection	Force, Displacement, Time Protection		
Power	3 Phase 200~240VAC, 30 A (110V is also available)	3 Phase 200~240VAC, 20 A (110V is also available)	Single Phase 200~240 VAC, 10 A (110V is also available)
Dimension	145 × 66 × 235 cm	145 × 66 × 235 cm	135 × 60 × 220 cm
Weight	1250 kg	1250 kg	800 kg



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